Case 2943

Aporcelainus Thorne & Swanger, 1936 (Nematoda): proposed designation of *Dorylainus superbus* de Man, 1880 as the type species

P.A.A. Loof

Agricultural University, Department of Nematology, P.O. Box 8123, 6700 ES Wageningen, The Netherlands

J. Heyns

166 Cornelius Street, Fairland, 2195 Johannesburg, South Africa

Abstract. The purpose of this application is to designate *Dorylaimus superbus* de Man, 1880 as the type species of the soil nematode genus *Aporcelaimus* Thorne & Swanger, 1936. The originally designated type species *D. regius* de Man, 1876 is indeterminate; the holotype (long destroyed) may have belonged to a species of *Sectonema* Thorne, 1930. The lectotype and other original specimens of *D. superbus* are well preserved and the species is widespread, with populations available for study.

Keywords. Nomenclature; taxonomy; Nematoda; Aporcelaimus; *Aporcelaimus superbus*; soil nematodes.

- 1. Thorne & Swanger (1936, p. 123) included seven nominal species of soil nematodes in the new genus *Aporcelaimus*, and designated *Dorylaimus regius* de Man, 1876 (p. 92) as the type species. The genus was placed in the family DORYLAIMIDAE.
- 2. Many other species were subsequently assigned to *Aporcelainus*. Heyns (1965, p. 19) pointed out that this had 'resulted in the genus practically becoming a dumping ground for all DORYLAIMINAE lacking a distinctly sclerotized anterior fixed ring for the guiding sheath [of the spear or tooth]', and he 'proposed to return to the original demarcation of this genus as intended by Thorne & Swanger (1936)'. Heyns reviewed *Aporcelainus* and based the new family APORCELAIMIDAE (p. 6) on it; he also placed *Sectonema* Thorne, 1930 and four new nominal genera in the family. The aporcelaimids are relatively large soil nematodes, mostly predatory on oligochaetes.
- 3. Unfortunately *Dorylaimus regius* de Man, 1876, the type species of *Aporcelaimus*, is indeterminate. The holotype (from Leiden, The Netherlands), the only specimen studied by de Man, was dissected and destroyed (see de Man, 1876, p. 93). In erecting *Aporcelaimus* Thorne & Swanger (1936) gave (p. 124) a redescription of *D. regius*, but this was based largely on Steiner's (1924) report of specimens of '*D. regius*' from Germany and Norway and was complemented by two drawings (pl. 28) of specimens from England.

- 4. The original specimen of *D. regius* certainly belonged to the APORCELAIMIDAE as defined by Heyns (1965), but the drawings (de Man, 1876, pl. 3) of it show a tooth-like odontostyle; this is very unlike that drawn by Steiner (1924, figs. 2C-E) and Thorne & Swanger (1936) and the specimen may have belonged to a species of *Sectonema*.
- 5. From his descriptions and illustrations it is evident that the specimens studied by Steiner (1924) belong to *Aporcelaimus* as now accepted, but they cannot be assigned to a particular species: we have examined one male and four females of his material but the condition of the head ends does not permit identification. Comparison of a slide of English (St Albans) specimens of '*Aporcelaimus regius*' studied by Thorne & Swanger (1936) with the Dutch type series (see para. 7 below) of *Dorylaimus superbus* de Man, 1880 shows the specimens to be conspecific, and a male from Liverpool on a second slide of theirs probably also belongs to *D. superbus*. The Thorne & Swanger specimens may well have come from the population from St Albans described by Goodey (1951, p. 288, fig. 145) under the name *Aporcelaimus superbus* (de Man, 1880).
- 6. A number of workers have used the name *Aporcelainus regius*, but in all cases the reports lack details which would enable the species to be identified or to be compared with de Man's original material. Such works include Brakenhoff (1913), Schneider (1923), Allgén (1925), Tulaganov (1949), Meyl (1954), Popovici (1968), Altherr (1974) and Tulaganov & Usmanova (1978).
- 7. In order to differentiate *Aporcelaimus* from other genera it is necessary to have a properly defined type species, and *Dorylaimus regius* certainly does not meet this criterion. A suitable type species is *D. superbus* de Man, 1880 (p. 79), which for nearly 50 years has consistently been placed in *Aporcelaimus*. As mentioned in para. 5 above, specimens of *A. superbus* were used by Thorne & Swanger (1936) for their redescription of '*Dorylaimus regius*' and their designation of that nominal species as the type species of *Aporcelaimus*. The five original specimens are preserved in de Man's 'Hollandsche Collectie', now at the Zoological Museum, Instituut voor Taxonomische Zoologie, P.O. Box 4766, 1009 AT Amsterdam. They have been described by Loof (1961), who (p. 237) designated a female (original registration H 36, now V.As 253) from Katwijk (The Netherlands) as the lectotype. The paralectotypes are registered as V.As 250, 251, 252 and 373. *A. superbus* is a widespread species, unlike most aporcelaimids, and populations are available for study.
- 8. The International Commission on Zoological Nomenclature is accordingly asked:
 - (1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Aporcelainus* Thorne & Swanger, 1936 and to designate *Dorylainus superbus* de Man, 1880 as the type species;
 - (2) to place on the Official List of Generic names in Zoology the name *Aporcelainus* Thorne & Swanger, 1936 (gender: masculine), type species *Dorylainus superbus* de Man, 1880 by the designation in (1) above;
 - (3) to place on the Official List of Specific Names in Zoology the name superbus de Man, 1880, as published in the binomen *Dorylainus superbus* (specific name of the type species of *Aporcelainus* Thorne & Swanger, 1936).

Acknowledgement

We thank Dr A. Morgan Golden (Beltsville, Maryland, U.S.A.) for putting specimens described by Steiner (1924) and Thorne & Swanger (1936) at our disposal; these are preserved in the USDA collection at Beltsville.

References

- Allgén, C. 1925. Beiträge zur Kenntnis der freilebenden Nematoden Schwedens. Arkiv för Zoologi, 18A: 1-40.
- Altherr, E. 1974. Nématodes de la nappe phréatique du réseau fluvial de la Saale (Thuringe). II. *Limnologica*, 9: 81–132.
- Brakenhoff, H. 1913. Beitrag zur Kenntnis der Nematodenfauna des nordwestdeutschen Flachlands. Abhandlungen naturhistorischen Vereins Bremen, 22: 267–311.
- Goodey, T. 1951. Soil and freshwater nematodes. 390 pp. Methuen, London.
- Heyns, J. 1965. On the morphology and taxonomy of the Aporcelaimidae, a new family of dorylaimoid nematodes. *Entomology Memoirs* (Pretoria), 10: 1–51.
- Loof, P.A.A. 1961. The nematode collection of Dr J.G. de Man. 1. Beaufortia, 8: 169-254.
- Man, J.G. de. 1876. Onderzoekingen over vrij in de aarde levende nematoden. *Tijdschrift der Nederlandsche Dierkundige Vereeniging*, 2: 78–196.
- Man, J.G. de. 1880. Die einheimischen, frei in der reinen Erde und in süssen Wasser lebenden Nematoden. Tijdschrift der Nederlandsche Dierkundige Vereeniging, 5: 1–104.
- Meyl, A.H. 1954. Die bisher in Italien gefundenen freilebenden Erd- und Süsswasser-Nematoden. Archivio Zoologico Italiano, 39: 161–264.
- Popovici, lu. 1968. Nematode din sol noi pentru fauna Romaniei. Studii si Cercatari de Biologie (Serie Zoologie), 20: 255–259.
- Schneider, W. 1923. Niederrheinische freilebende Nematoden. Zoologischer Anzeiger, 56: 264–281.
- Steiner, G. 1924. On some plant parasitic nemas and related forms. *Journal of Agricultural Research*, **28**: 1059–1066.
- Thorne, G. & Swanger, H.H. 1936. A monograph of the nematode genera *Dorylaimus* Dujardin, *Aporcelaimus* n.g., *Dorylaimoides* n.g. and *Pungentus* n.g. *Capita Zoologica*, 6(4): 1–223.
- Tulaganov, A.T. 1949. Rastenieiadnye i pochvennye nematody Uzbekistana. 227 pp. Tashkent. Tulaganov, A.T. & Usmanova, A.Z. 1978. Fitonematody Uzbekistana. 441 pp. Tashkent.